UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,045	04/01/2005	Ikuo Mimura	00250.000033	7937

5514 7590 10/18/2006

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
TWEEL JR, JOHN ALEXANDER	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/530,045	MIMURA, IKUO	
	Examiner	Art Unit	
	John A. Tweel, Jr.	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) *16-36* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/9/05*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *10/13/06* .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species: Claims 1-15, pertaining to retroreflective displays with RFID tags and claims 16-36, pertaining to retroreflective displays having internal illumination. The species are independent or distinct because claims 16 and 27 also claim the illumination and layering.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. During a telephone conversation with Lawrence Perry on 10/13/06 a provisional election was made without traverse to prosecute the invention of the first invention, claims 1-15. Applicant in replying to this Office action must make affirmation of this election. Claims 16-36 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

4. The disclosure is objected to because of the following informalities:

- Page 1: The first paragraph of the specification should include continuity data, in this case the national stage application data of a Japanese PCT.
- Page 2, Line 1: The word "informations" should be singular.
- Page 2, Line 28: The word "informations" should be singular.
- Page 11, Line 1: The word "units" should be singular.
- Page 11, Line 28: There should be a space between "CC" and "units".
- Page 11, Line 31: There is an extra period at the end of this sentence.
- Page 12, Line 27: The word --retroreflective-- has been misspelled.
- Page 17, Line 3: Should there be a word such as --The-- before the word "kind"?

- Page 17, Line 17: The phrase "so processed antenna" is not easily understood.
- Page 20, Line 23: The phrase "As such methods" is not easily understood.
- Page 20, Line 34: An article such as --the-- is needed before "present device".
- Page 22, Line 14: An article such as --The-- is needed before "above".
- Page 23, Line 19: An article such as --the-- is needed before "presence".
- Page 28, Line 17: The word --used-- has been misspelled as "sued".
- Page 32, Line 18: There is no wire labeled No. 47 in Figure 14.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bantli et al** [U.S. 5,621,571] (supplied by applicant) in view of **Janovec et al** [U.S. 6,004,422].

For claim 1, the retroreflective display device taught by Bantli includes the following claimed subject matter, as noted, 1) the claimed information display layer is met by the printed information (No. 4) on the license plate, 2) the claimed retroreflective layer is met by the retroreflective sheeting (No. 6), 3) the claimed radio frequency identification (RFID) units are read on the specification wherein information is

communicated using radio transmission, and 4) the claimed antennas are met by the antenna network (No. 8). However, there is no mention of surface and back protective layers.

Protective layers are not new in the use of retroreflective displays. The microstructured articles with backing taught by Janovec include retroreflective members in conjunction with sealing layers and backing members. One layer (No. 48) is even described as a protective overcoat. This and the backing layer are plain evidence that protective layers have been used in retroreflective devices for some time.

Added protection are always needed in tags that are exposed to weather and the elements, as the Bantli reference depicts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include protective layers in the system of Bantli for the purpose of providing added security and protection in harsh environments.

For claim 2, Figure 1b of Bantli depicts the antenna on the back of the reflective surface.

For claim 3, Figure 9b of Bantli depicts the antenna in front of the reflective surface.

For claim 4, Figures 4 and 4a of Bantli depicts the use of cube-corner prismatic retroreflective units.

For claim 5, the specification of Bantli (Col. 5, Lns. 66-67) describes total internal reflection of light rays.

For claim 6, the specification of Bantli (Col. 6, Lns. 7-10) explains the use of vapor coating, thereby placing a metallic thin film layer thereon.

For claim 7, Figures 2 and 6 of Bantli depict micro glass bead-type retroreflective units.

For claim 8, the specification of Bantli (Col. 6, Lns. 7-10) explains the use of vapor-coated aluminum, placing a metallic film layer thereon.

For claim 9, resin layers have been used in retroreflective sheeting for some time. The Background of Bantli even refers to this resin for protective spacing. Therefore, this is considered an obvious variation on the prior art.

For claims 10-13, the specification of Bantli (Col. 6, Ln. 51-Col. 7, Ln. 4) details the use of a discontinuous metallic thin film layer, especially in use with the antenna pattern, wherein no degradation of the antenna is seen.

7. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bantli et al** in view of **Janovec et al** as applied to claims 1 and 12 above, and further in view of **Ghaem et al** [U.S. 5,381,137].

For claim 14, the combination of references above includes the claimed subject matter as discussed in the rejection of claims 1 and 12 above. However, there is no mention of at least two RFID units with communications antennae installed thereon.

Multiple RFID units on a single tag are not new in the RFID art. The tagging system taught by Ghaem includes a plurality of resonant circuits (No. 13) on a tag (No.

12) that enables the detection of a resonant frequency in a detection zone. The obvious advantage of this system is to operate in a plurality of different detection frequencies.

As the Bantli reference pertains to RFID communication, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include at least two RFID units in the system comprising Bantli for the purpose of increasing the versatility and communication properties of the RFID device.

For claim 15, the differing tagging systems of Ghaem produce tags that operate at different resonant frequencies.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wilson et al [U.S. 5,008,142] uses a resin in embedded lens retroreflective sheeting.

Lauro et al [U.S. 5,604,485] includes a plurality of RF resonant circuits in a three-dimensional array.

Endo et al [U.S. 6,229,444] is a theft proof tag that is effective regardless of the material of the article to which it is attached.

Blama et al [U.S. 6,304,169] uses a plural resonant RF tag system.

Comiskey et al [U.S. 6,327,072] presents a display element using a subtractive layering process.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Tweel, Jr. whose telephone number is 571 272 2969. The examiner can normally be reached on M-F 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass can be reached on 571 272 2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAT
10/15/06

JOHN TWEEL
PRIMARY EXAMINER